RELATIONSHIP OF FOOD RELATED OPINIONS AND SELECTED VARIABLES OF NURSING HOME RESIDENTS IN NORTHEASTERN OKLAHOMA

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CHAPTER I

INTRODUCTION

Background and Significance

Americans generally accept the fact that a nutritious food intake is essential to good health. The nutritional adequacy of daily food consumption is of utmost importance in and maintaining a desirable quality of life. Todhunger and Darby (1, p. 45) have said: "Nutritional adequacy is basic for survival and for maintaining health throughout life and should receive special attention in the geriatric patient." Watkins (2) urged careful consideration of ways that nutrition could improve the lives of the elderly despite their infirmities. He stated that nutrition is the environmental factor most readily subject to human control in contributing to the health of the elderly population.

Bozian (3) indicated that nurses should regard nutrition as the foremost manipulable factor that can be directed toward prevention and treatment of diseases and maintenance of good health. With emphasis on nutrition, increased attention has been given to food served in nursing homes. Since food is of utmost importance to the nursing home resident's total well-being, nursing homes attempt to provide adequate nutrition and high quality food service.

Leighton and Harrill (4) stated that the quality of care in the nursing home was closely linked with nutrition. Selection of protective foods was of particular importance to the aged individual. The 65 year

old has significant differences in his body from the 20 year old (5). The food intake should provide less calories with the same level of protein, minerals, and vitamins as that of the young adult (1). Persons 65 years and older tend to be among the most poorly nourished age group.

The over 65 year group has increased, with approximately 10 percent of the population in 1975 in this age range. It is estimated that 17 percent of the population will be 65 or older by the year 2030 (6). Good nutrition will enhance their quality of life. Malnutrition in the aged is a complex problem in that physical, social, and psychological factors are encountered (7). Degenerative diseases, depression, and loneliness are common conditions among the elderly (8).

Schiffman (9) found that elderly persons have a considerably reduced sensitivity to odors and the older person shows a decline in the number of taste buds per papilla; therefore, less acute sense of taste. Deficiencies of protein, iron, B vitamins, vitamin A, vitamin C, and calcium have been identified among the elderly in various studies (10) (11) (25) (26) (27) (28) (29) (33) (34) (35) (36) (37) (38) (39) (42) (43) (44) (45) (46).

One-third to one-half of the health problems of the 20 million elderly in the United States are believed to be related to nutrition (12). Many of the health problems are related to long standing inappropriate food habits. Knowledge of nutrition and health conditions are often inadequate among the elderly population. Traditions and emotional factors influence intake of certain foods (12). There is a need to know food related opinions of nursing home residents in order to establish food service and menus that will fit the needs of the population in the nursing home.

Statement of the Problem

The purpose of this study was to identify food related opinions expressed by selected nursing home residents. The data were analyzed to determine if there were significant relationships between food related opinions held by the subjects and the length of time spent in the home, their age, their sex, and prescribed diet. Based on the findings, suggestions and recommendations were made to aid the nursing home food service personnel in meeting the resident's nutritional needs and satisfaction in regard to food.

Objectives of the Study

The objectives of this study were:

1. To determine the differences between food related opinions and length of residency in the nursing home.

2. To determine the differences between food related opinions and age of the nursing home resident.

3. To determine the differences between food related opinions and sex of the nursing home resident.

4. To determine the differences between food related opinions and prescribed diets of the nursing home resident.

5. To make suggestions and recommendations based on findings in the study to aid nursing home personnel to establish food service and menu planning that meets nutritional needs and gives food related gratification to the nursing home population.

Hypotheses of the Study

The following hypotheses were formulated as a basis for the study:

1. There will be no significant differences between food related opinions and length of stay for the resident.

2. There will be no significant differences between the food related opinions and the age of the resident.

3. There will be no significant differences between the food related opinions and sex of the resident.

4. There will be no significant differences between food related opinions and the prescribed diet of the resident.

Assumptions

This study was conducted on the basis of the following underlying assumptions:

1. The individuals who participated in the study were honest with their opinions given.

2. The researcher could use the interview method in such a manner that the resident could understand.

3. A test instrument could be developed to identify the food related opinions among nursing home residents that would have meaning.

4. A knowledge of food related opinions could contribute to more effective planning of menus and food service in the homes that were selected.

Limitations

The following limitations of the research were taken into consideration:

1. The participant's interest span was short.

2. Only 10 nursing homes in northeastern Oklahoma were selected

which limited the extent to which generalizations could be made from the data.

3. Only residents who ate meals in the dining room were included in the sample.

4. The age of the resident was 65 and over.

5. Interview method was used which limited the sample size.

Definition of Terms

This study will be related to nursing care homes. Terms used in this study that relate to the opinions were as follows:

1. Adequate nutrition: "Quality of nutrition in which the essential nutrients in correct amounts and balance are utilized to promote the high level of physical and mental health throughout the entire life cycle" (14, p. 4).

2. Elderly: Sixty-five years of age and over.

3. Long-term care facility: A nursing home is one in which the resident will probably live the rest of his/her life.

4. Malnutrition: An impairment of health resulting from a deficient nutrient (excessive imbalance of nutrients).

5. Nutrient: Chemical substance in foods which nourishes the body as protein, minerals, vitamins, fats, carbohydrates, and water.

6. Nursing home:

> An establishment where nursing care is the primary and predominate function of the facility. Those meeting the following criteria are classified as nursing care homes: one or more registered nurses or licensed practical nurses are employed and 50 percent or more of the residents receive nursing care during the week (15, p. 6).

7. Opinion: A conclusion or judgment held with confidence by the

individual and expressing one's feeling in what is a matter of evaluation (16).

8. Prescribed diet: Diet order given by physician.

9. Recommended Dietary Allowance (RDA):

> Levels of intake of essential nutrients considered in the judgment of the Natural Sciences Committee on dietary allowances of the Food and Nutrition Board on the basis of available scientific knowledge to be adequate to meet the known nutritional needs of practically all healthy persons (17, p. 1).

10. Regular diet: There are no restrictions for food allowed.

11. Therapeutic diet: A diet that has changed some ingredient, form of nutrient from the regular diet, used as therapeutic agents and as preventive measures to correct deficiencies, to afford rest to certain organs, to adjust food intake to the body's ability to metabolize the nutrients, and to bring about the changes in body weight whenever necessary.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The scope of this study encompassed opinions held by nursing home residents. Background given as to the reasons many of the elderly residents have deficiencies in nutrients is revealed by research from studies that have been conducted with data analyzed for the elderly. As the elderly population has increased, the total number who live in nursing homes has also increased. In 1973, the number of elderly residents cared for in nursing homes (which was five percent of the population age 65 and over) was 11 percent greater than the number reported in 1971 (11). Those who work with nursing home residents need to be aware of special dietary needs in the maintenance of good health.

Aging Process

Unfortunately, the cause of aging has remained a mystery. By the time a person has lived 65 years, there are significant differences between his body and that of the 20 year old (5). Hypotheses on aging too often are based on limited experimental data and evidence in regard to biology of the human aging process. It now has been generally recognized that human aging probably was caused by a number of mechanisms that may have operated simultaneously (7). According to Shock (18), human aging is a very complex process that could not be explained by

a single underlying cause.

Krehl (7) explained several theories about the causes of aging. These are as follows:

1. When a person grows older his genetic material, DNA, gradually becomes impaired which in turn limits the body's capabilities to carry out some of its normal functions.
2. . . . there may be other flaws in mechanisms of protein synthesis.
3. . . . aging was part of a progressive breakdown in the immunologic processes of the body.
4. . . . the aging process involved the unstable and highly reactive molecular fragments known as free radicals.
5. . . . aging was the result of intermolecular cross linking of proteins or nucleic acids which are not metabolized by the usual enzymes.
6. Vitamin E offers primary biochemical protection against peroxidation of polyunsaturated fatty acids.
7. Vitamin C may have been involved in the process of aging (pp. 65-66).

Dilman (19) hypothesized that the key process in aging is a gradual elevation of the threshold of sensitivity of the hypothalamus feedback. The hypothalamic feedback provides stability of the internal environment which is altered by aging. These alterations gradually result in permanent old age deviations.

Nutritional Status of the Elderly

Although there have been many unanswered questions about aging and its mechanisms, much has been learned in the past 25 years. Aging does not influence all individuals or organs the same. Chronological age has been a poor prognosticator of the physiological function (18) (20) (21).

Many elderly persons have approached their later years in a precarious nutritional state. Elderly adults with poor eating habits may

be in marginal deficiency states due to the cumulative effects of inadequate intake over their lifetime. Among older people, eating has been influenced by failing physical and mental health, by decreased taste buds, saliva flow, muscle tone, ill fitting dentures, established food habits, and loneliness. Rae and Burke (13) found that the elderly had a strong desire to maintain good health despite the many adverse factors which influence their eating habits. They found that tradition and emotional factors had influenced the greater consumption of bread, cereal, and sweets. Rae and Burke's studies also revealed the consumption of milk was usually inadequate.

Nutrient requirements do not change markedly with advancing age, except for a reduction of calories. Pao's (21) studies revealed that life style, socioeconomic status, psychological changes, and presence of diseases have altered nutrient intake in the elderly. Nutritional deficiencies do not arise quickly or spontaneously, but are the result of prolonged dietary neglect (22). Methods used to find if the elderly had a deficiency have been food records, 24-hour recall, and dietary histories. The standards used to measure adequacy of nutrient intake have varied. Several researchers have set their own standards, while other researchers used the Recommended Dietary Allowances set by the National Academy of Sciences (23).

Selected Nutrition Surveys

Studies concerned with nutrient intake have not been taken as frequently for persons past the middle years as those of younger ages. However, a number of larger dietary surveys made in the United States and Canada have included a percentage of subjects over 59 years of age.

In addition, dietary surveys of various smaller groups selected for a variety of specialized situations and conditions have also been reported (24).

Ten State Nutritional Survey

In 1967, the United States Congress directed the Department of Health, Education, and Welfare to determine the magnitude and location of malnutrition in this country. The survey was limited to 10 states: Washington, California, Texas, Louisiana, South Carolina, Kentucky, West Virginia, Michigan, Massachusetts, and New York. The population included in the survey had low income; therefore, the study was not representative of the entire population. Data were obtained from 24,000 families which contained 86,000 persons. Within the study were 2,086 over 59 years of age. The Ten State Committee set their own nutritional standards. Calories were found to be low for all the elderly population. Over one-half of the elderly females and one-third of the elderly males had an intake of less than 10 grams of iron consumed daily. The Spanish American subjects over 59 years of age had vitamin A intakes of 2,622 IU to 3,441 IU which were below the 5,000 IU RDA. The mean average intake of thiamin, riboflavin, and niacin was adequate for the 59 years and older population surveyed. One-third of all older subjects included in the study had thiamine intake below 0.4 mg/1,000 Kcal and niacin below 6.6 mg/1,000 Kcal. In the survey, one-third of all older subjects had less than 55 mg of vitamin C daily (25).

Health and Nutritional Examination Survey

The Health and Nutritional Examination Survey (HANES) was

undertaken by the National Center for Health Statistics (26) to establish a continuing national surveillance system under the authority of the National Health Survey Act of 1956. The study had about 30,000 persons, age 1 through 74 years, noninstitutionalized population over a two-year period. Four methods of assessments were used: (1) dietary intake, (2) blood and urine analysis, (3) clinical malnutrition findings, and (4) various body measurements. The nutrients surveyed were vitamins A, C, D, thiamin, calcium, phosphorus, and iron. For subjects over 59 years of age, iron was less than the RDA in the low income group. One-third of all elderly subjects had less than RDA of calcium, vitamin A and vitamin C (26).

Canada's Nutritional Survey

Canadian researchers conducted a study to determine the nutritional status of their population. The Canadian RDA were used for their standard reference. The 24-hour recall method was conducted for data collected. Among the over 65 year olds were 926 males and 859 females; 116 were Indian males and 114 Indian females, 29 Eskimo males, and 19 Eskimo females. Approximately 40 percent of all older females had intake of protein under 0.7 mg/kg of body weight, over one-half of the females had less than 500 mg of calcium intake daily. Iron intake was under the 10 grams daily in at least one-half of the females and one-third of the males. Vitamin A daily consumption was found to be a problem in the survey (especially among the older Eskimos as 88 percent of the females and 77 percent of the older males had less than 750 IU daily). One-third of the older subjects had levels of thiamin and riboflavin less than the RDA. Ascorbic acid mean intake was below the 30 mg reference (27).

USDA Food Consumption Survey

In the spring of 1965, a nationwide study was made to determine the nutrient intake of the population in the United States. Among those included in the study (in the 65 to 70 age group) were 460 males and 624 females. The survey included 219 males and 240 females over 74 years of age. A 24-hour recall of food consumed, with RDA as a standard, was used in the study. Men over 75 years of age had diets low in calcium, vitamin A, thiamin, riboflavin, and ascorbic acid. In the group of 65 to 74 years of age, women's diets were below the RDA for calcium, thiamin, and riboflavin daily consumption. Females over 75 had low intakes of iron and vitamin A. Both men and women had nutrient intakes lower than the RDA for vitamin A and C in the over 75 year age group. In this study, one-half of those included over 75 years of age took vitamin-mineral supplements (28).

A Study on Food of Older Persons Living at Home

A study by LeBovit (29) of elderly persons was conducted at Rochester, New York. A selected group of beneficiaries of Old Age, Survivors, and Disability Insurance was surveyed with the one-week recall method. Participants included in the study were over 65 years of age from 283 households. The participants lived alone or with one other person over 55 years of age; they were all on low incomes, few had been to college, and three-fourths had only elementary school education. The diets reported in this research met two-thirds of the RDA to be adequate. Seventy-two percent of the households had diets that met this level for all nutrients, except for calcium and vitamin C. Diets low in one nutrient were usually low in several others. In this study, over 37

percent interviewed were taking supplements of multivitamins. The most striking fact was that even with the inclusions of supplements, only four percent of the diets improved to the point where they could be considered good among the supplement users.

Comparison of Nutrient Intake and Length of Life

Research was conducted to assess the influence on nutrients taken early in life and to the effect on later life. Steinkamp, Cohen, and Walsh's (30) study was to relate nutritional status to mortality rate, by determining the nutritional status and dietary habits over a 24-year period. Ninety-seven subjects were in the study of whom most were between the ages of 40 and 69 years when the study began in 1948. In 1972, of these 97 subjects, there were 28 participating survivors. The survivors had higher intakes of protein and vitamin C at the beginning of the study. At the end of the study, the survivors had a 25 percent decline in calories; less fat; less carbohydrates; and increased vitamin C, niacin and protein. The survivors were all healthy and living independently in the community. Schlenker (31) reported that these findings would indicate such patterns may contribute to the maintenance of good health and longer life.

Nutrient Intake and Energy Expenditure of Ages

McGandy, Barrows, Spanish, Meredith, Stone, and Norris (32) conducted a study to evaluate the effect of age on dietary intake and to estimate energy expenditure and its relation to caloric intake of various ages. There were 252 participants in the study of which 136 were over 55 years of age. The 1964 Recommended Dietary Allowances was used

as a reference. A seven-day record of food intake was kept for the study. Results indicated that the elderly (75 to 99 years of age) group consumed fewer calories than recommended. Calcium intake among the 54 to 64 age group was found to be low with other nutrients adequate.

A Survey of Food Habits Among Elderly in Pennsylvania

Guthrie, Black, and Madden (33) conducted a survey among 99 citizens over 60 years of age. The 24-hour recall was used to collect data with two-thirds of the 1968 Recommended Dietary Allowance used as reference. Results among the rural Pennsylvanians showed that over 63 percent had diets deficient in calcium and vitamin A. Deficiencies in protein and iron were noted in 27 percent and 18 percent of the diets, respectively; while a notably higher percentage (45%) was deficient in calories and vitamin C.

Nutrient Intake in Regard to Social and Economic Levels

Davidson, Livermore, Anderson, and Kaufam (34) used one-week recall plus one-week food records to determine nutrient intake of 104 over 51 year olds in Boston, Massachusetts. One hundred percent of the 1958 Recommended Dietary Allowance was used as a reference. The mean calorie intake was found to be low for both sexes. One-third of the surveyed had low intakes of iron, thiamin, and riboflavin.

Food Practices of Elderly Living at Home

Lyons and Trulson (35) surveyed 100 individuals over 65 years of

age to study their nutritional status and health. They used the dietary history method and 100 percent of the 1953 Recommended Dietary Allowances. Iron was below the standard for females and calories were low for males. Thiamin was 0.94 mg, just short for the 1 milligram for both sexes.

Effect of Nutrition with Seasonal Changes

Diddle (36) surveyed 100 elderly people to determine if the season had effect on their nutritional status. The survey was conducted in the spring and fall. Social, economic, and dietary intake data were obtained on both seasons. The data were analyzed in terms of influences of sex, age, and economic status in various assessments of nutritional status. Results indicated that the intake of iron and riboflavin was at sub-optimal levels in 17 percent of all women who were overweight. Data revealed that women had higher levels of plasma ascorbic acid, urinary thiamin, and lower hematocritic values than did the men surveyed. For the seasonal data, Diddle's research revealed that in the fall the level of plasma carotene and urinary riboflavin was higher than in the spring with no change in other nutrient levels.

Food Intake of Healthy Women

Fry, Fox, and Linkswiler (37) conducted two studies among 65 year old or older women. One study kept a seven-day food intake of 26 females. The second research included six participants who used weighted food intakes for 25 to 120 days. One hundred percent of the 1958 Recommended Dietary Allowances was used as a reference. Results revealed that both groups had less than recommended daily allowance iron

intakes. All other nutrients were adequate in both studies.

Nutrition Programs

The impact of nutrition programs was the focus of additional research studies--how the food helped in their nutritional intake. Three studies have given insight to the advantages of the programs (38) (39) (40).

Meal Programs Adequacy

Kohrs, O'Hanlon, and Eklund (38) conducted a study in central Missouri which included 466 individuals over 59 years of age. This study was to evaluate the effect of meal programs on adequacy of nutrient intake of older Americans. The 1974 Recommended Dietary Allowances were used as a reference. The one-day food records method was used to collect data. Calcium and niacin were both below the recommended allowance while other nutrients were found adequate in the study.

Joering (39) assessed four senior service centers and a home delivered meal program to determine nutritional contribution of meal programs to dietary needs of senior citizens. Included in the study were 135 females and 50 males. Two-thirds of the 1968 Recommended Dietary Allowances was used as a reference. The daily intake of all nutrients was above standard. Male participants that were not in the meal program study had inadequate intakes of calories and thiamin. Female respondents without a meal provided had inadequate intake of calcium daily.

Holmes (40) evaluated poor eating habits, financial resources,

obtaining and preparation of food, health-related problems, and emotional factors related to food. One hundred fifty elderly participants were included in the study. They lived in high density, low income areas, and received one meal a day, five days a week, 50 weeks a year, under the Title IV funding. Social interaction, participants' committees, and nutrition education were included in this study. Results indicated that the nutrition programs had a dramatic and significant impact on participants in terms of eating habits, nutritional knowledge, interpersonal relationships, and morale. The meals lured the isolated older people into resocialization.

Institutionalized Studies

One million of the United States' population over 65 years of age live in an institution (41). The growing number, together with increased state and federal financing of long-term care through Medicare and Medicaid, emphasize the important role that nursing homes play in the welfare of the elderly. Nutrition and dietary status have been investigated for the institutionalized elderly, as well as the noninstitutionalized.

Clarke and Wakefield (42) compared eating behavior of nursing home residents to elderly living in their own homes. There were 99 participants in the nursing homes and 98 participants in their own homes over 70 years of age. Twenty-two food groups were on the questionnaire conducted by a trained interviewer. A nutritional score of one to eight was used with 100 percent of the Recommended Dietary Allowance for 1968 as a reference. Results showed that calcium intake and calories were below RDA for all subjects with other nutrients adequate.

Hankin and Antonmattel (43) determined if sufficient food was purchased to meet 1953 Recommended Dietary Allowances in 13 nursing homes. A one-week inventory and a three-day food record was used for the study. Data collected indicated that only one home out of the 13 provided less than the 4,000 IU of vitamin A for each resident. The findings indicated that six out of the 13 homes furnished less than the RDA for ascorbic acid based on 75 mg daily for males and 70 mg daily for females.

Harrill, Erbes, and Schwartz (44) compared the nutrient intake of institutionalized and noninstitutionalized women; 15 respondents lived in their own homes and 45 respondents were in the nursing home. Daily calcium intake was below the two-thirds level of the Recommended Dietary Allowances for both groups. Calories, thiamin, calcium, and iron daily intakes were substandard for both groups, while other nutrients were adequate.

Tucker, Brine, and Wallace (45) conducted research which included 48 participants over 60 years of age who lived in institutions. Ninety percent of the 1958 Recommended Dietary Allowances were used as a reference. Tucker et al. reported that one-half of the subjects consumed less than 0.9 g/kg body weight of protein. Iron intake was below 10 grams reference in at least one-half of the females. Fifty percent of the institutionalized subjects had a niacin intake below the reference. One-third of the subjects surveyed consumed less than the 67 mg of ascorbic acid daily intake for males and 63 mg daily for females.

Justice, Howe, and Clark (46) determined differences in nutritional status in elderly ill who required extended nursing care. Twelve males and 32 females were included in the study. Food records for five to six

nonconsecutive days were recorded and evaluated. Results identified that calcium and niacin intakes were below the 1974 Recommended Dietary Allowance for all of the 44 nursing home residents surveyed. Bone densities of the women in this study revealed that at least two-thirds of the subjects had osteoporosis.

Common Nutrition Related Problems

The individual dietary patterns in the majority of the elderly remain similar to those which have been acquired by habits established at a younger age. Pelcovits (47) related a study of a 24-hour dietary recall made among 3,500 elderly which revealed that one-fourth of this group ate fewer than three meals a day. One-half ate breakfast and supper; more than one-eighth ate lunch and supper; the remainder reported eating one meal a day which may have been patterns set earlier in life. There are many factors which occur with age that have been shown to contribute to nutritional deficiencies. A few of these are revealed in this study.

Taste buds have changed with age in number and distribution. The taste buds lost first have been shown to be the sweet and salty ones with only bitter and sour taste buds left (48).

Cohen and Gitman (49) conducted a research study on taste buds with 100 noninstitutionalized individuals under the age of 65 plus 248 institutionalized participants over 65 years of age. The study had three groups: group one was composed of 45 individuals between the ages of 18 and 39, group two had 55 individuals between the ages of 40 and 64. The third group consisted of 248 institutionalized residents over 65 years of age. The ability to recognize the basic tastes of sour,

sweet, salty, and bitter was tested. Tests were run between meals; the patient's mouth was rinsed before and after the test. None of the younger group advocated complaints of the taste with a marked contrast to 33 percent of the individuals over age 65 who complained. The complaints most frequently present were of the food being sour, bitter, and dry.

Byrd and Gertman (50) experimented with three age groups of 20 individuals each. Taste sensitivity was determined by using two drops each of sucrose, sodium chloride, citric acid, and quinine monohydrochloride on the outstretched tongue in the areas of greatest known sensitivity. The experiment failed to find food complaints related to taste perception of the elderly.

Schiffman (9) found that elderly people have a reduced sensitivity to odors. The elderly subjects have been shown to require a threshold concentration of at least 11 times as great as did the younger subjects in the study. Newman, Doyenmuehle, and Busse (51) found, in the study of 256 "normal" subjects, only 32 percent had odor ability comparable to that of a younger individual.

Fifty percent of Americans have lost their teeth by 65 years of age. The percentage increased to 66 percent by age 75. Ill-fitting dentures have become an increased problem with advanced age. Because of loss of teeth, the foods should be prepared in an attractive and distinctive way and easy to chew (46).

Chope and Breslow (52) quoted Morgan who had demonstrated a study to assess nutritional knowledge and attitudes of elderly toward nutrition and diet in relation to their actual food behavior, their nutritional intake, and their adherence to food fads. There was a definite

correlation between knowledge, attitudes, and actions studied toward food.

Other researchers have indicated that low educational levels have contributed to malnutrition (53) (54) (55). Grotkowski and Sims (56) used an instrument which contained 25 true-false and multiple choice items from research of Eppright, Fox, Frye, Lamkin, and Vivian (55); Wang (51); Harrison, Sanchez, and Young (57); and Dwyer, Feldman, and Mayer (59). Results from Grotkowski and Sims' study revealed that nutritional knowledge was significantly related to three of the four nutritional attitudes. Nutritional knowledge was highly correlated with the "nutrition is important" attitude and negatively related to misconceptions about weight-reduction diets and belief that food and supplements can be used as medicine. Other recent investigators have also found positive associations between nutritional knowledge and desirable nutritional attitudes which influenced food intake (55) (60) (61).

The definition of an attitude has been studied by several researchers without an agreement made (62) (63) (64) (65). The inadequacy of a definition of attitudinal terms has complicated the interpretation of many food habit studies.

Summary

The review of literature indicated that some 20 million individuals over 65 years of age have varied nutrient deficiencies. The most common nutrient deficiencies found were calcium, iron, vitamin A, and vitamin C. Age alone does not cause nutrient deficiencies, but many other factors contribute (i.e., dulled taste buds, insensitive odor receptors,

and ill-fitting dentures). Psychological and social aspects contribute to deficient nutrient intake, including a lack of nutritional knowledge and/or a depressed state from loneliness.

CHAPTER III

PROCEDURE

The purpose of this study was to identify food related opinions held by selected nursing home residents who ate their meals in the facility's dining room. Food related opinions expressed were analyzed to determine if a relationship existed between the opinions and length of time in the facility, age, sex, and prescribed diet of the resident. The opinions were grouped into four sections: food service, therapeutic diets, normal nutrition, and food habits. Based on the findings, suggestions and recommendations were made to assist the nursing home food service personnel in meeting the nutritional needs and gratification of the resident.

Population and Sample

Nursing home residents in 10 facilities located in eastern Oklahoma (five in Tulsa County, two in Okmulgee County, one in Muskogee County, two in McIntosh County) were subjects of this study. Residents were selected from homes in which the researcher was employed as the consultant dietitian. A good rapport, therefore, had already been established which insured confidence and cooperation with the subjects. The residents who ate in the dining room were obtained from the permanent admission record book. A random sample was selected from those residents by choosing every fifth entry of eligible individual. Fifty-one

residents who ate in the dining room were chosen (see Table I). This was approximately 15 percent of all dining room eating residents. If the resident was unable or unwilling to participate in the research, the dining room eating resident listed next in the admission book was chosen until the total number of subjects was obtained.

TABLE I

NUMBER OF PARTICIPANTS INCLUDED IN STUDY

	Total Residents	Total Dining Room Residents	Number Surveyed
Ambassador Manor	75	44	6
Bixby Manor	80	51	7
Cedars Nursing	67	33	5
Checotah Manor	44	15	3
Homestead Nursing	45	25	3
Leisure Manor	40	17	4
McIntosh Nursing	41	23	5
Rebold Manor Nursing	92	32	4
Riverside Nursing	98	52	6
Sherwood Nursing	102	56	8
TOTAL	699	348	51

The purpose and procedures of the study were explained to the administrator of the home and permission was requested to conduct the research. All of the administrators agreed to participate in the study.

Development of Instrument

The data collection instrument (see Appendix B) was developed by the researcher with two sections. Section I was designed to obtain demographic data which included length of residency, age, sex, and diet prescription of the subject. This information was obtained from the resident's chart and recorded by the researcher.

Section II of the questionnaire contained food related opinions according to food service, therapeutic diets, normal nutrition, and food habits. A Likert-type scale was used to record the repsonses given. The numerical descriptions were:

strongly agree = 5

agree = 4

uncertain = 3

disagree = 2

strongly disagree = 1.

The first draft was reviewed by members of the resercher's graduate committee. Their suggestions were noted and revisions made with the assistance of the researcher's adviser. The revised draft was mailed to 10 experts who were considered especially knowledgeable in the area of nutrition for the elderly. The experts consisted of two Oklahoma State University faculty members, the Director of Nutrition Division of the Oklahoma State Department of Health, two Oklahoma State Health Department staff dietitians, and five nursing home consultant dietitians.

A transmittal letter (see Apendix A) asked each expert to review the instrument and make comments regarding the subject matter, accuracy of the questions, and overall potential of the instrument for obtaining data. All mailings were by first class mail, with stamped self-addressed envelopes enclosed. Of the 10 questionnaires mailed, 100 percent were returned. The suggestions from the experts were incorporated in the questionnaire according to the objectives of the study.

The revised instrument was pretested by 10 residents in a nursing home who were not included in the sample. The interview method was used by the researcher. The researcher conducted the interview to determine clarity of questions, time needed to complete the questionnaire, and reliable statements. The final draft of the instrument was developed which omitted statements that pretesters answered alike.

Data were collected in the fall of 1979. The interview method, which took approximately 30 minutes per subject, was used by the researcher. Each subject was contacted and an appointment made to avoid interference with other activities. The purpose and procedure were explained to the resident.

The responses were recorded on a computer code sheet for each participant in the study. The data were numerically coded, keypunched, and checked for errors.

Analysis of Data

The hypotheses of this study determined the statistical procedure used for analyzing the data. The statistical procedure (Analysis of Variance) was used to test the differences between the means of the responses to food related opinions and length of residency, age, sex,

and prescribed diet. For this statistical procedure, the .05 level of significance was established to accept or reject the hypotheses.

Suggestions and recommendations were given to aid the dietary personnel and administrators to establish food service and menus. Thus, to aid in the overall satisfaction of the residents toward food.

This chapter has presented the overall design of the study. Survey population, instrument development, data collection, and data analysis were discussed. In the following chapter, results of the study are presented.

CHAPTER IV

RESULTS AND DISCUSSION

The purpose of this study was to identify food related opinions expressed by selected nursing home residents who ate their meals in the facility's dining room. The data were collected and analyzed to determine the differences between the food related opinions held by the respondent and their length of residency, age, sex, and prescribed diet. This chapter included demographic identification of the subjects and discussion of the findings from the analysis of the data.

Age and Sex of the Respondents

Of the 51 respondents, 31 (60.78%) were females and 20 (39.22%) were males. There were 11 more women than men in the study.

The age categories in this study were: 65-69, 70-74, 75-79, 80-84, and over 85 years of age. The ratio of males to females was approximately the same in three age groups: 65-69, 70-74, and over 85 years of age. However, in the two age groups 75 through 84, 36 percent (19) of the total sample, there were 14 females and five males. Sixty-two percent (32) of the participants were over 75 years of age, while 25 percent (13) were over the age of 85 (see Table II).

Length of Residency

Length of residency of the respondents was categorized as: under

one year, one to two years, two to three years, and over three years. Twenty of the subjects (39.2%) lived in the nursing home less than one year and nine (17.7%) lived in the home one to two years. Thus, the majority of the residents 29 (56.9%) had resided in the nursing home for less than two years. Seven (13.7%) lived in the home two to three years and 15 residents (29.4%) had lived in the nursing home over three years (see Table III).

TABLE II

DESCRIPTION OF RESPONDENTS BY AGE AND SEX

Age	Females	Percent	Males	Percent	Total	Percent
65-69	5	9.80	5	9.80	10	19.61
70-74	5	9.80	4	7.85	9	17.65
75-79	6	11.76	2	3.93	8	15.69
80-84	8	15.68	3	5.88	11	21.57
Over 85	7	13.72	6	11.76	13	25.48
TOTAL	31	60.78	20	39.22	51	100.00

Prescribed Diets of the Respondents

More respondents 24 (47.1%) were on a regular diet; than any of the other prescribed diets. However, there were approximately one out of four (25.5%) on a low salt diet. Five of the respondents (9.8%) were on

a diabetic diet with the remainder, nine (17.6%) on some other type of diet such as low salt-low fat, high fiber-low protein, or high potassium-low fat diet (see Table IV).

TABLE III

DESCRIPTION OF RESPONDENTS BY LENGTH OF RESIDENCY

Length of Residency	Number of Residents	Percent
0-1 year	20	39.21
1-2 years	9	17.65
2-3 years	7	13.73
Over 3 years	15	29.41
TOTAL	51	100.00

TABLE IV

DESCRIPTION OF RESPONDENTS BY DIET PRESCRIPTION

Diet Prescription	Number	Percent
Regular	24	47.1
Low Salt	13	25.5
Diabetic	5	9.8
Other	9	17.6
TOTAL	51	100.0

Data Discussion

A mean score was obtained from the food related opinions by a Likert-type scale of one through five. The responses to each food related opinion were score as follows:

Strongly agree = 5

Agree = 4

Uncertain = 3

Disagree = 2

Strongly disagree = 1.

Data were analyzed for relationship between food related opinions according to length of residency, age, sex, and prescribed diet in regard to opinions held toward food service, therapeutic diet, normal nutrition, and food habits. Analysis of Variance statistical procedure was used to test each hypothesis.

Length of Residency

The first hypothesis stated there will be no significant relationship between food related opinions and length of residency. Food related opinion mean score from the responses according to length of residency was 3.2%. The subjects who had resided in the nursing home over three years had the highest mean score (3.47). The numerical difference between the mean scores according to length of residency was slight with the lowest mean score (3.1) from those who had resided in the nursing home from two to three years (see Table V).

Mean score obtained from the food service opinions of the respondents according to the time spent in the nursing home was analyzed by Analysis of Variance statistical procedure. Results disclosed a 2.25

F score which was not significant at the .05 level. Thus, the food related opinions and the length of residency did not show a significant difference. Hence, the first null hypothesis was accepted (see Table VI).

TABLE V

MEAN SCORES OF FOOD RELATED OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO LENGTH OF RESIDENCY (N = 51)

Length of Residency	Mean Score
Less than 1 year	3.21
1-2 years	3.34
2-3 years	3.10
Over 3 years	3.47
Overall Mean Score	3.29

Food Service and Length of Residency

In order to be able to implement the findings from this study, data were obtained and analyzed form each food related opinion section according to food service, therapeutic diets, normal nutrition, and food habits. Analysis of Variance statistical technique was used to determine the significance of the difference for each variable. The first section of the instrument (Appendix B, items A1-A9) related to food

service opinions. When these food service opinions mean scores were obtained according to the length of residency, a mean score of 3.28 was disclosed. The food service opinions mean score (3.28) was very similar to the total food related opinions mean score (3.29). However, the two to three year residents had a mean score of 2.76 and the one to two year residents had a mean score of 3.69 (see Table VII).

TABLE VI

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' FOOD RELATED OPINIONS ACCORDING TO LENGTH OF RESIDENCY

Source	df	Sum of Squares	Mean Square*	F Value	Prob F**
Length of Residency	3	0.88	0.29	2.25*	0.092
Residual	47	6.15	0.13		

*Based on adjusted sum of squares due to unequal of observations in each cell.

**$p < .05$.

Mean score obtained from the food service opinions and time spent in the nursing home were analyzed by the Analysis of Variance statistical procedure. The F score of 2.7 obtained was not significant at the .05 level (see Table VIII). Thus, the food service opinions held by

the respondents were not significantly influenced by length of time they had spent in the home.

TABLE VII

MEAN SCORES OF FOOD SERVICE OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO LENGTH OF RESIDENCY (N = 51)

Length of Residency	Mean Score
0-1 year	3.17
1-2 years	3.69
2-3 years	2.76
Over 3 years	3.47
Overall Mean Score	3.28

The analysis of opinion related to food service according to percentage of agreed and disagreed responses identified that over 60 percent of the respondents agreed on six out of nine items. These items were as follows:

Number		Agreed
2.	Food is served attractively here	76%
1.	Meal times are happy here	70%
4.	Cooks serve well seasoned foods	67%
5.	Staff is willing to give mealtime assistance	66%
9.	Food is served at proper temperatures	66%

3. Home strives to serve liked foods 60%

The largest percentage of disagree responses among the above items came from the under one year residents in all but one opinion. The over three year residents had a greater percentage of disagree responses than other length of stay respondents on item 4; that the cooks strived to serve well seasoned foods (see Appendix C, Table XLV).

TABLE VIII

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' FOOD RELATED OPINIONS ACCORDING TO LENGTH OF RESIDENCY (N = 51)

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Length of Residency	3	3.56	1.18	2.7*	0.10
Residual	47	20.32	0.40		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

Therapeutic Diets and Length of Residency. Opinions of the respondents toward, therapeutic diets (see Appendix B, items B10-B19) were analyzed according to the length of time spent in the home. An overall mean score of 3.22 was obtained. The mean score from the opinions of the residents, in relation to therapeutic diets, varied from a low of

3.09 for those who had lived in the home less than one year to a high of 3.40 for the residents who had resided in the home over three years (see Table IX).

TABLE IX

MEAN SCORES OF THERAPEUTIC DIET OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO LENGTH OF RESIDENCY (N = 51)

Length of Residency	Mean Score
0-1 year	3.09
1-2 years	3.30
2-3 years	3.14
Over 3 years	3.40
Overall Mean Score	3.22

Analysis of Variance statistical technique was used to determine the significance of the difference between the therapeutic diet opinions and the length of residency. An F score of 1.11 was indicated. Which was not significant at the .05 level. Hence, the length of residency did not significantly affect the therapeutic food related opinions of the subjects (see Table X).

The analysis of opinions related to therapeutic diet according to agreed and disagreed responses identified that over 50 percent of the respondents agreed on four of the eight items listed. These were:

Number		Percentage
11.	If a doctor prescribes a diet it should be followed	76%
13.	An over weight individual should be willing to cut down on food to lose weight	74%
16.	All persons with the same type diets should eat at the same table	54%
12.	A diabetic should be given a piece of the birthday cake at the monthly birthday parties	53%

The over three year residents had the largest percent (6%) of disagreed for the doctor's prescribed diet followed; whereas, only two to four percent of all other length of residency respondents groups disagreed. The under one year resident had the higher percentages of disagree responses than other length of residency groups for items 12, 13, and 16 (see Appendix C, Table XLVI).

TABLE X

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' THERAPEUTIC DIET OPINIONS ACCORDING TO LENGTH OF RESIDENCY

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Length of Residency	3	0.90	0.30	1.1*	0.34
Residual	47	12.64	0.26		

*Based on adjusted sum of squares due to unequal cells.

**$p < .05$

Length of Residency and Normal Nutrition. Nutrition opinions (Appendix B, items C18-C26) were analyzed in relation to the length of time the respondent ahd resided in the nursing home. An overall mean of 3.4 was obtained. The highest mean score (3.6) was obtained from the residents who had resided in the nursing home more than three years (see Table XI).

TABLE XI

MEAN SCORES OF NORMAL NUTRITION OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO LENGTH OF RESIDENCY (N = 51)

Length of Residency	Mean Scores
0-1 year	3.30
1-2 year	3.20
2-3 years	3.30
Over 3 years	3.60
Overall Mean Score	3.40

It is proposed by the researcher that the three years and over residency group had a high mean score (3.6) from normal nutrition opinions because they were fed well balanced meals in the nursing home for a longer period. The Analysis of Variance of the differences between opinions about normal nutrition and length of residency did not

reveal a significant F value (1.23) at the .05 level. Hence, the difference between opinions about normal nutrition and length of residency were not significant (see Table XII).

TABLE XII

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' NORMAL NUTRITION OPINIONS ACCORDING TO LENGTH OF RESIDENCY

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Length of Residency	3	1.1	0.36	1.23*	0.30
Residual	47	13.8	0.29		

*Based on adjusted sum of square due to unequal number of observations in each cell.

**$p < .05$.

The analysis of opinions related to normal nutrition according to percentage of agreed and disagreed responses identified that over 60 percent of the respondents agree on six of the nine items (see Appendix C, Table XLVII).

These were:

Number		Agreed Percentage
24.	Orange juice or some other Vitamin C juice should be consumed daily	82%
23.	Two servings of meat eaten daily	68%
25.	Four servings of fruits and vegetables eaten daily	66%
20.	Drinking of 2 glasses of milk daily	64%
22.	Food served follows well balanced meal plan	64%
21.	Proper foods are served to prevent constipation	63%

From the opinion that a Vitamin C food or juice should be consumed daily, 13 percent of the 18 percent disagree answers came from the under one year resident. Although 64 percent of the respondents agreed that the meals served followed a well balanced meal plan, 14 percent of the under one year residents were uncertain (see Appendix C, Table XLVII).

Length of Residency and Food Habit Opinions

The length of residency data collected revealed a mean score of 3.2 for food habit opinions and length of stay in the nursing home. The mean score range was small in this section with an extent of 3.2 to 3.4 (see Table XIII).

An F value of 0.38 obtained from the Analysis of Variance in relation to food habit opinions and stay in the home was not statistically significant (see Table XIV).

TABLE XIII

MEAN SCORES OF FOOD HABITS OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO LENGTH OR RESIDENCY (N = 51)

Length of Residency	Mean Scores
0-1 year	3.20
1-2 years	3.20
2-3 years	3.40
Over 3 years	3.20
Overall Mean Score	3.20

TABLE XIV

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' FOOD HABIT OPINIONS ACCORDING TO LENGTH OF RESIDENCY

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Length of Residency	3	0.3	0.10	0.38*	0.7
Residual	47	13.11	0.27		

*$p < .05$

**Based on adjusted sum of squares due to unequal number of observations in each cell.

Age of Resident

The second hypothesis states there will be no significant difference between food related opinions and age of the nursing home resident. Food related opinion mean scores from responses, according to age, was 3.29. The youngest age group (65-69) had the highest mean score and the over 85 year old respondents had the lowest mean score of 3.17 (see Table XV).

TABLE XV

MEAN SCORES OF FOOD RELATED OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO AGE (N = 51)

Age	Mean Scores
65-69	3.39
70-74	3.36
75-79	3.36
80-84	3.26
Over 85	3.17
Overall Mean Score	3.29

Variations in food related opinions according to age were small. The mean scores decreased with age. In the Analysis of Variance, an F value of 0.6 was obtained which was not significant at the .05 level

(see Table XVI). Hence, the second hypothesis was accepted.

TABLE XVI

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' FOOD RELATED OPINIONS ACCORDING TO AGE

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Age	4	0.38	0.09	0.6*	0.5
Residual	46	6.65	0.14		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

The analysis of opinions related to food habits according to percentage of agreed and disagreed responses indicated that over 50 percent agreed answers on five out of nine items. These were as follows:

Item 33, supper should be served at 5 p.m. or later	86 percent
Item 27, it is good to try new foods	68 percent
Item 28, fried foods are more enjoyable and have more flavor than other foods	67 percent
Item 32, breakfast should be served at 7 a.m. or earlier	61 percent
Item 30, it is good to have a variety of food at breakfast	56 percent

See Appendix C, Table XLVIII.

Summary. In summary the highest mean score responses for food service, therapeutic diet, normal nutrition were obtained by the residents who had resided in the home three years or more. The F values did not reveal a significant difference for the overall food related opinions according to the time spent in the home. Further analysis according to food service, therapeutic diet, normal nutrition, or food habits did not reveal a significant difference.

Age of Respondent and Food Service Opinions. Due to the lack of significant difference found in food related opinions and age of the respondents data from the questionnaire sections were analyzed (Appendix B). In the first section of food service related opinions, according to age, revealed an overall mean score of 3.2. The numerical range was from 3.55 for the youngest group (65-69) to a low of 3.11 for the over 85 year old respondents (see Table XVII).

The Analysis of Variance statistical technique disclosed an F score of 0.56 for the data collected for food service opinions and the age of the respondent. The F score was not significant at the .05 level (see Table XVIII). Thus, food service opinions held by the nursing home residents were not significantly affected by the age of the resident.

All of the respondents in the age group of 75-80 agreed with the item that the food was served attractively. The age group 65-69 all agreed with item nine that the food were served at the proper temperatures. It was of interest to the researcher that 67 percent of all respondents agreed that the cooks served well seasoned foods. The largest percentage (6%) of disagree responses to this opinion came from the over 85 year age group (see Appendix C, Table XLIX).

TABLE XVII

MEAN SCORES OF FOOD SERVICE OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO AGE OF THE RESPONDENT (N = 51)

Age	Mean Scores
65-69	3.55
70-74	3.23
75-79	3.29
80-84	3.25
Over 85	3.11
Overall Mean Score	3.28

TABLE XVIII

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' FOOD SERVICE RELATED OPINIONS ACCORDING TO AGE OF THE RESPONDENT

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Age	4	1.12	0.28	0.56*	0.69
Residual	46	22.76	0.49		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

Age of the Respondent and Therapeutic Diet Opinions. An overall mean score of 3.22 was indicated by the respondents according to therapeutic diet and age. The numerical mean scores were very close. The youngest respondents (65-69) revealed the highest mean score (3.36), while the 80-84 year residents had the lowest mean score (3.14) (see Table XIX).

TABLE XIX

MEAN SCORES OF THERAPEUTIC DIET OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO AGE OF THE RESPONDENT

Age	Mean Scores
65-69	3.36
79-74	3.20
75-80	3.25
80-84	3.14
Over 85	3.19
Overall Mean Score	3.22

Analysis of Variance statistical technique revealed an F value of 0.23. This score does not indicate a significant difference at the .05 level. Hence, the age did not significantly affect the therapeutic diet opinions of the subjects (see Table XX).

TABLE XX

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' THERAPEUTIC DIET OPINIONS ACCORDING TO AGE OF THE RESPONDENT

Source	df	Sum of Squares	Mean Square	F Value*	Prob F**
Age	4	0.27	0.06	0.23	0.90
Residual	46	13.27	0.28		

*Based on adjusted sum of squares of unequal number of cells.

**$p < .05$.

The analysis of opinions related to therapeutic diets according to percentages of agreed, uncertain, and disagreed responses identified that over 20 percent of the respondents were uncertain on four out of eight items. These were:

Item 14, honey may be included in a diabetic diet — 43 percent

Item 15, people who have stomach ulcers and are on a bland diet may have coffee and tea — 43 percent

Item 12, a diabetic should be allowed a piece of birthday cake at the birthday parties — 23 percent

Item 16, all persons with the same type diets should eat at the same table — 22 percent

The over eighty five year old respondents had the highest percentage of uncertainty for honey on the diabetic, tea and coffee on the bland diets (see Appendix C, Table L).

Fifty-five percent of all respondents disagreed that a low salt diet would be easy to follow, 29 percent of these disagree responses

were from those who were over 80 years of age. Of the 10 percent uncertain responses to the statement that a doctor's diet prescribed diet should be followed, eight percent of these were from the 85 year and older respondents (see Appendix C, Table L, items 10, 11).

Sixty-three percent of all residents agreed with the opinion that proper foods were served to prevent constipation; 35 percent disagreed of which 15 percent of these were from the over 85 year old respondents (see Appendix C, Table LI).

Age of the Respondent and Normal Nutrition Opinions. The normal nutrition opinions according to age of the respondents revealed an overall mean score was 3.41. The numerical mean scores varied from a high of 3.68, held by the 70-74 year old respondents, to a low of 3.29, held by the subjects over 85 years of age (see Table XXI).

TABLE XXI

MEAN SCORES OF NORMAL NUTRITION OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO AGE OF THE RESPONDENT (N = 51)

Age	Mean Scores
65-69	3.40
70-74	3.58
75-79	3.50
80-84	3.30
Over 85	3.29
Overall Mean Score	3.41

Analysis of Variance statistical technique for normal nutrition opinions revealed the F value of .50 which did not indicate a significant difference between age of the resident responses about normal nutrition (see Table XXII).

TABLE XXII

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' NORMAL NUTRITION OPINIONS ACCORDING TO AGE OF THE RESPONDENT

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Age	4	0.6	0.15	0.50*	0.7
Residual	46	14.2	0.30		

*Based on adjusted sum of squares of unequal number of observations in each cell.

**$p < .05$.

It was of interest to the researcher that the over 85 year old group had the largest percentage of disagree opinion to the proper foods are served here to prevent constipation (see Appendix C, Table LI).

Age of the Respondents and Food Habits Opinions. A mean score of 3.27 was obtained for food habit related opinions and the age of the respondents. The over 85 year old subjects held the lowest score (3.09) and 70-74 year old respondents had the highest mean score (3.40) (see

Table XXIII).

TABLE XXIII

MEAN SCORES OF FOOD HABIT OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO AGE OF THE RESPONDENTS

Age	Mean Scores
65-69	3.24
70-74	3.40
75-79	3.38
80-84	3.30
Over 85	3.09
Overall Mean Score	3.27

Analysis of Variance statistical technique revealed the F value (.63) did not indicate a significant difference between the age of the resident and food habit opinions at the .05 level (see Table XXIV).

Sixty-eight percent of the respondents held the opinion that it is good to try new foods and they would be willing to do so. Only 10 percent of all residents over 75 years of age disagreed with the trying of new food statement. Fifty-one percent held the opinion it would be good to have the same type of food served on a particular day each week. Again, over 75 year old respondents gave opinions which indicated that they would like more variety in their meals with 18 percent disagreed

answers to the same type of food served on a particular day each week. Sixty-seven percent of the respondents held the opinion that fried foods tasted better than other foods. Fifteen percent of the over 75 year age groups disagreed with the opinion that fried foods tasted better than other foods. Fifty-three percent of the respondents agreed with opinion that they would rather have whole meats and vegetables cooked separately than together as a casserole. Twenty percent of the over 75 year age groups disagreed that they would like to have the whole meats and vegetables cooked separately more than in a casserole (see Appendix C, Table LII).

TABLE XXIV

ANALYSIS OF VARIANCE OF FOOD HABIT OPINIONS ACCORDING TO AGE OF THE RESPONDENTS

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Age	4	0.70	0.17	0.63*	0.64
Residual	46	12.73	0.27		

*Based on adjusted sum of squares of unequal cells.

**$p < .05$.

Summary. The second hypothesis of this study indicated that there was not a significant difference between food related opinions and age

of the resident. Thus, the second hypothesis was not rejected. However, scores in food service, normal nutrition, and food habit sections revealed a lower mean score among the oldest residents in the study.

Sex of Respondent and Food Related Opinions

The third hypothesis stated there will be no significant difference between the food related opinions and sex of the resident. The mean overall score response for the food related opinions and sex of the respondent was 3.29. The numerical variation in mean scores given by the sexes was very slight with the males .01 below females (see Table XXV).

TABLE XXV

MEAN SCORES OF FOOD RELATED OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO SEX OF THE RESPONDENTS (N = 51)

Sex	Mean Scores
Females	3.30
Males	3.29
Overall Mean Score	3.29

The Analysis of Variance F score of 0.004 did not indicate a significant difference between the opinions held by the sex of the respondents. Thus, the third hypothesis was accepted (see Table XXVI).

TABLE XXVI

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' FOOD RELATED OPINIONS ACCORDING TO SEX OF THE RESPONDENTS

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Sex	4	0.00	0.000	0.004*	0.94
Residual	46	7.04	0.143		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

Sex of the Respondent and Food Service Opinions. Since the data collected for the sex of the respondents and food related opinions did not show a significant difference, information in regard to the food related opinions sections was reviewed. The food service opinions, according to the sex of the subject revealed an overall mean score of 3.28. Females' mean score was slightly higher than the males (see Table XXVII).

The Analysis of Variance F value was 1.22 for the difference of food service opinions according to the sex of the subjects in this study. This value was not significant at the .05 level. Thus, opinions held about the food service rendered in the nursing homes of this study were not influenced by the sex (see Table XXVIII).

TABLE XXVII

MEAN SCORES OF FOOD SERVICE OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO SEX OF THE RESPONDENTS (N = 15)

Sex	Mean Scores
Females	3.37
Males	3.15
Overall Mean Score	3.28

TABLE XXVIII

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' FOOD SERVICE RELATED OPINIONS ACCORDING TO SEX OF RESPONDENTS

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Sex	1	0.58	0.58	1.22*	0.27
Residual	49	23.30	0.47		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

Seventy percent of the respondents held opinions that the meal times were happy. Both sexes revealed a four percent disagree opinions

of the happiness of their meals. Sixty-six percent of the respondents held the opinion that the food was served at the proper temperature. Only four percent of the male and 13 percent disagreed with the proper food temperatures. The food temperature opinion had twenty percent uncertain responses, 10 percent from both females and male respondents. Thirty-three percent of the females and 30 percent of the males disagreed they were served as much fresh fruits and vegetables as they would like to have served (see Appendix C, Table LIII).

Sex of Respondent and Therapeutic Diet Opinions. The overall mean score for opinions related to therapeutic diet and the sex of the respondent was 3.22. The females mean score was 3.24 and males 3.20.

TABLE XXIX

MEAN SCORES OF THERAPEUTIC DIET OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO SEX OF THE RESPONDENTS (N = 51)

Sex	Mean Scores
Females	3.24
Males	3.20
Overall Mean Score	3.22

Analysis of Variance statistical technique revealed the F value of 0.08. This value did not indicate a significant difference between the

sex of the respondents and their opinions in regard to therapeutic diet opinions (see Table XXX).

TABLE XXX

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' THERAPEUTIC DIET OPINIONS ACCORDING TO SEX OF THE RESPONDENTS

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Sex	1	0.02	0.02	0.08*	0.76
Residual	49	13.52	0.27		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

The male respondents indicated a fourteen percent uncertainty to the females four percent on the opinion that a low salt diet would be easy to follow. Whereas, female respondents revealed a 25 percent uncertainty to the 18 percent on coffee or tea on a bland diet. Fifty percent of the female respondents and only 26 percent of the male respondents agreed that the physician prescribed diet should be followed (see Appendix C, Table LIV).

Sex of the Respondent and Normal Nutrition Opinions. The mean scores of normal nutrition opinions held by nursing home residents

according to sex of the respondents revealed an over all mean of 3.41. The numerical variations were small with females score of 3.42 and males 3.39 (see Table XXXI).

TABLE XXXI

MEAN SCORES OF NORMAL NUTRITION OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO SEX OF THE RESPONDENTS (N = 51)

Sex	Mean Scores
Females	3.42
Males	3.39
Overall Mean Score	3.41

Analysis of Variance statistical technique gave the F value of .02 which did not reveal a significant difference at the .05 level (see Table XXXII).

The analysis of opinions related to normal nutrition according to the percentage of agreed and disagreed responses identified a 51 to 64 percent agreed with the opinions these foods should be consumed daily. The percentages given were:

Item 23, two servings of meat daily	68 percent
Item 24, four servings of fruits and vegetables	66 percent
Item 20, two glasses milk daily	64 percent

Item 26, four servings of bread and cereal daily 51 percent

TABLE XXXII

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' NORMAL NUTRITION OPINIONS ACCORDING TO SEX OF THE RESPONDENT

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Sex	1	0.007	0.007	0.02*	0.86
Residual	49	14.830	0.300		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

It was of interest to the researcher in comparison of the agreed responses that the consumption of meat opinion revealed females 80 percent agreed to only 52 percent agreed for male respondents (see Appendix C, Table LV).

Sex of Respondent and Food Habit Opinions. A mean score of 3.27 was indicated for the food habit opinions held, according to the sex of the resident. Males disclosed a higher mean score (3.41) than the females (3.16) (see Table XXXIII).

Analysis of Variance statistical procedure gave an F value of 3.02 for the respondents' opinions according to sex and food habit opinions

(see Table XXXIV). All of the F value scores indicated there was not a significant difference between food related opinions held and sex of the resident.

TABLE XXXIII

MEAN SCORES OF FOOD HABIT OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO THE SEX OF THE RESIDENT (N = 51)

Sex	Mean Scores
Females	3.16
Males	3.41
Overall Mean Score	3.27

TABLE XXXIV

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' OPINIONS ACCORDING TO SEX OF THE RESPONDENT

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Sex	1	0.78	0.78	3.02*	0.08
Residual	49	12.65	0.25		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

Sixty-one percent of the respondents agreed that breakfast should be at 7 a.m. or earlier, 27 percent of the respondents disagreed. Twenty-two percent of the disagree responses for early breakfast came from females and five percent from males (see Appendix C, Table LVI).

Prescribed Diets of Respondents and Food Related Opinions

The fourth hypothesis stated there will be no significant difference between food related opinions and type of prescribed diet of the nursing home resident. The prescribed diets researched in this study were: regular, low salt, diabetic, and other non-regular orders.

The mean score of food related opinions according to prescribed diet was 3.28. The overall mean score was greater for the diabetic dieter than for all other prescribed dieters (3.43) (see Table XXXV).

TABLE XXXV

MEAN SCORES OF FOOD RELATED OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO THE PRESCRIBED DIETS OF THE RESPONDENTS (N = 51)

Diet Order	Mean Scores
Regular	3.28
Low Salt	3.29
Diabetic	3.43
Other Diet Orders	3.28
Overall Mean Score	3.29

Analysis of Variance F value was 0.22 for the difference between prescribed diets of the respondent and their food related opinions (see Table XXXVI).

TABLE XXXVI

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' FOOD RELATED OPINIONS ACCORDING TO PRESCRIBED DIET OF THE RESPONDENT

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Diet	3	0.101	0.03	0.22*	0.87
Residual	47	6.940	0.14		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

Prescribed Diets of the Respondents and Food Service Opinions. Since there was not a significant difference between food related opinions and prescribed diets, data was analyzed from each food related opinion section according to food service, therapeutic diet, normal nutrition, and food habits. A mean score of 3.28 was indicated in regard to prescribed diets of the respondents and their food service opinion (see Table XXXVII).

The Analysis of Variance statistical F value of 0.56 revealed a nonsignificant difference between food service opinions and the

prescribed diets of the respondents (see Table XXXVIII).

TABLE XXXVII

MEAN SCORES OF FOOD SERVICE OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO RESPONDENTS' PRESCRIBED DIET (N = 51)

Diet	Mean Scores
Regular	3.30
Low Salt	3.30
Diabetic	3.40
Other Diet Orders	3.01
Overall Mean Scores	3.28

TABLE XXXVIII

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' FOOD SERVICE OPINIONS ACCORDING TO PRESCRIBED DIET OF THE RESPONDENTS

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Diet	3	0.83	0.27	0.56*	0.64
Residual	47	23.04	0.49		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

It was of interest that 60 percent of all respondents agreed with the opinion that the nursing home strived to serve foods the residents liked. Of those who disagreed, 14 percent were on a regular diet and 10 percent were on a low salt diet. Sixty-six percent of the total respondents agreed that the nursing home staff was willing to help them with their meals. Sixteen percent of the residents on the non-restricted regular diet were uncertain about the assistance given and only two percent of all restricted or modified food intakes respondents expressed uncertainty about the help given. Sixty-six percent of the respondents held the opinion that the food has been well seasoned. Twenty-five percent disagreed with the fact that the foods had been well seasoned. Ten percent of the disagreed responses for the well seasoned food responses came from the non-restricted dietary regime (see Appendix C, Table LVII).

Prescribed Diet Opinions and Therapeutic Diets. Opinion results were analyzed for the therapeutic diet section in regard to the prescribed diet of the respondent. The overall mean scores of 3.22 was obtained (see Table XXXIX).

Analysis of Variance statistical procedure indicated the F value of 0.52, which was not a significant difference between opinions about therapeutic diets and the prescribed diet of the respondents (see Table XL).

It was of interest to the researcher that 12 percent of the low salt diet respondents disagreed that they had as much bacon as they would like or that was allowed on their diet. Sixty-seven percent of the respondents agreed with the opinion which concerned well seasoned foods served. Eight percent agreed responses for the well seasoned

foods came from the low salt respondents; whereas 15 percent disagreed responses came from other dietary regime subjects (see Appendix C, Table LVIII).

TABLE XXXIX

MEAN SCORES OF THERAPEUTIC DIET OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO PRESCRIBED DIET OF THE RESPONDENT (N = 51)

Diet	Mean Scores
Regular	3.15
Low Salt	3.36
Diabetic	3.15
Other Diet Orders	3.27
Overall Mean Scores	3.22

Prescribed Diets of the Respondents and Normal Nutrition Opinions. The mean score from opinions given, in relation to normal nutrition and the diet of the resident, was 3.41. The numerical mean score range was from 3.8 for the diabetic diet respondents to a low of 3.31 for the low salt diet subjects (see Table XLI).

Analysis of Variance statistical F value of 1.08 was indicated for the opinions of prescribed diets according to normal nutrition (see Table XLII.

TABLE XL

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' THERAPEUTIC DIET OPINIONS ACCORDING TO RESPONDENTS' PRESCRIBED DIETS

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Diet	3	0.44	0.14	0.52*	0.67
Residual	47	13.11	0.27		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

TABLE XLI

MEAN SCORES OF NORMAL NUTRITION OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO THE PRESCRIBED DIET OF THE RESPONDENTS (N = 51)

Diet	Mean Scores
Regular	3.36
Low Salt	3.31
Diabetic	3.80
Other Diets	3.40
Overall Mean Scores	3.41

TABLE XLII

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' NORMAL NUTRITION OPINIONS ACCORDING TO PRESCRIBED DIET OF THE RESPONDENTS

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Diet	3	0.96	0.32	1.08*	0.36
Residual	47	13.88	0.29		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

The diabetic respondents had all "agree" answers in three of the opinions in the normal nutrition section of the questionnaire. These were: number 22, the food here follows a well balanced meal plan; number 24, I should drink orange juice or some other Vitamin C juice daily; and number 25, I should eat at least four servings of fruit and vegetables daily (see Appendix C, Table LIX).

Prescribed Diet of the Respondents and Food Habit Opinions. The results of the food habit opinions from respondents, in relation to the prescribed diet, disclosed a mean score of 3.27. The variation of mean scores was small--other dieters' score (3.39) to low salt dieters' score (3.17) (see Table XLIII).

Analysis of Variance statistical F value of 0.32 was nonsignificant for the difference between food habit opinions held by nursing home

residents and their prescribed diet (see Table XLIV).

TABLE XLIII

MEAN SCORES OF FOOD HABIT OPINIONS HELD BY NURSING HOME RESIDENTS ACCORDING TO THE PRESCRIBED DIET OF THE RESPONDENTS (N = 51)

Diet	Mean Scores
Regular	3.25
Low Salt	3.17
Diabetic	3.33
Other Dieters	3.39
Overall Mean Score	3.27

TABLE XLIV

ANALYSIS OF VARIANCE OF NURSING HOME RESIDENTS' FOOD HABIT OPINIONS ACCORDING TO PRESCRIBED DIET

Source	df	Sum of Squares	Mean Square	F Value	Prob F**
Diet	3	0.27	0.09	0.32*	0.81
Residual	47	13.16	0.28		

*Based on adjusted sum of squares due to unequal number of observations in each cell.

**$p < .05$.

Forty-seven percent of all respondents agreed their food habits had improved since coming to the nursing home to live, 18 percent were uncertain. Ten percent of the uncertain responses were from those on a restricted diet (see Appendix C, Table LX).

Summary

The hypotheses were not rejected in this study. The Analysis of Variance statistical data did not reveal a significant difference at the .05 level for food related opinions held by nursing home residents and their length of stay, age, sex, or prescribed diet. Since there was not a significant difference revealed, data was reviewed to determine if a significant difference of opinion existed toward food service, therapeutic diets, normal nutrtion, and food habits of the respondents. A statistical significant difference was not indicated.

The fifth objective of this study was to make suggestions and recommendations based on findings in the study to aid nursing home personnel to establish food service and menu planning that meets the nutritional needs and gives food related gratification to the nursing home population. Data has been itemized with total percentages in Appendix C of the opinions given from each item on the questionnaire in order to better offer suggestions.

From food service section (see Appendix B, items A1 through A9), there were six opinions with over 60 percent agree answers. The largest percentage (76%) of the respondents answers came from attractively served food opinion, 70 percent held the opinion that meal times were happy., and 67 percent of the respondents agreed with the opinions the food was well seasoned, served at the proper temperatures and that the

home strived to serve foods they liked (see Appendix C, Tables XLV, XLIX, LIII, and LVII).

When asked the opinion if they were served the kind of snacks they liked, 49 percent agreed and 49 percent disagreed (see Appendix C, Table XLV, item 8). Fifty-five percent of the respondents disagreed that they were served as much bacon as they would like or allowed on their diets (see Appendix C, Tables XLV, XLIX, LIII, and LVII, item 7). Sixty-three percent of the respondents disagreed that they were served as much fresh fruits and vegetables as they would like (Appendix C, Tables XLV, XLIX, LIII, and LVII, item 6).

The second section of the food related opinion questionnaire (Appendix B, items B10 through B17) pertained to therapeutic diets. A summary of the opinion percentage answers (see Appendix C, Tables XLVI, L, LIV, and LVIII) revealed that 76 percent of the respondents agreed that if a doctor prescribed a diet it should be followed. Seventy-four percent of the respondents agreed that an over weight individual should be willing to cut down on food to lose weight (see Appendix C, Table XLVI, items 11, 13). Fifty-four percent of the respondents agreed that residents on the same diet should eat at the same table, while 53 percent of the respondents agreed that apiece of the birthday cake should be given to the diabetic at the birthday party. Twenty-two to 23 percent of the respondents were uncertain about the same prescribed diets at the same table and diabetic fed the birthday cake (see Appendix C, Table XLVI, L, LIV, and LVIII, items 16, 12).

Forty-three percent of the respondents were uncertain about honey on the diabetic diet, as well as, coffee and tea on the bland diets. Only 18-20 percent of the respondents disagreed with these two opinions (see

Appendix C, Tables XLVI, L, LIV, and LVIII, items 14 and 15).

Thirty-six percent of the respondents agreed that unallowed food on a residents diet brought from outside should be given to the individual, while 47 percent disagreed and 18 percent were uncertain (see Appendix C, Table XLVI, item 17). Only 31 percent of the respondents agreed that a low salt diet would be easy to follow, 51 percent disagrees, and 18 percent were uncertain about the ease of following the low salt regime (see Appendix C, Table XLVI, Item 10).

The third section of the food related opinion questionnaire dealt with normal nutrition (see Appendix B, Items C18 through C26). Eighty-two percent of all respondents agreed that a Vitamin C juice should be consumed daily (see Appendix C, Tables XLVII, LI, LV, and LIX, item 24). From the basic four food group opinions, two servings of meat, four fruit and vegetables servings, and two glasses of milk consumed daily disclosed 64 to 68 percent agree responses. Four servings of bread and cereal consumed daily received only 51 percent agree answers from the nursing home residents interviewed (see Appendix C, Tables XLVII, LI, LV, and LIX, items 20, 23, 25, and 26).

Sixty-four percent of the respondents agreed that the food served followed a well balanced meal plan with 20 percent not certain about the balanced meal served. Sixty-three percent of the respondents interviewed agreed that proper foods were served to prevent constipation; however, 35 percent disagreed that a non-constipation diet was offered (see Appendix C, Tables XLVII, LI, LV, and LIX, item 21 and 22). Fifty-three percent of the respondents agreed that gas forming foods should be served only at the noon meal; however, 31 percent were uncertain about when these foods should be served (see Appendix C, Tables XLVII, LI, LV,

and LIX, item 19).

The last section of the food related opinion questionnaire (see Appendix B, D27 through D35) related to food habits opinions held by the nursing home respondents. A strong response of 86 percent of the residents interviewed agreed that the evening meal should be at 5 p.m. or later, while 61 percent agreed the breakfast meal should be served at 7 a.m. or before (see Appendix C, Tables XLVIII, LII, LVI, and LX, items 32 and 33). Sixty-eight percent of the respondents agreed it is good to try new foods, while 51 percent would like to have a one week's cycle menu with the same foods served each day of the week. Fifty-six percent of the respondents agreed that it is good to have a variety in the breakfast meal (see Appendix C, Tables XLVIII, LII, LVI, and LX, items 27, 30, and 24).

Sixty-seven percent of the respondents believed fried foods were more enjoyable than other foods, while 53 percent gave the opinion meats and vegetables cooked separately tasted better than in a casserole (see Appendix C, Tables XLVIII, LII, LVI, and LX, items 28 and 31). Fifty-five percent of the residents disagreed that a large snack is good prior to going to bed. Forty-seven percent of the respondents gave the opinion that their food habits had improved since coming to the nursing home to live (see Appendix C, Tables XLVIII, LII, LVI, and LX, items 29 and 35).

Recommendations and suggestions from the information were revealed in Chapter V. The food related opinions among nursing home residents offered a way to incorporate the resident's food related desires in the overall care of the occupant.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

The purpose of this study was to identify food related opinions expressed by nursing home residents and to identify the sex, and prescribed diet of the respondents. A questionnaire was developed by the researcher to obtain data from nursing home residents who ate in the dining room of selected long-term care facilities in northeastern Oklahoma.

The questionnaire was developed in two sections: Section I included questions to obtain length of residence, age, sex, and prescribed diet of the respondent; Section II included food related opinion questions according to four categories. These were opinions about food service, therapeutic diets, normal nutrition, and food habits. From data collected in this study, recommendations were made to assist nursing home dietary staff in providing adequate nutrition and food related gratification for the residents.

Fifty-one nursing home residents, from 10 nursing homes located in northeastern Oklahoma, were included in this study. Subjects who ate in the dining room were chosen at random from the permanent admission record books. The interview method was used to collect the data. Possible responses to food related opinions were: strongly agree = 5, agree = 4, uncertain = 3, disagree = 2, or strongly disagree = 1.

Data from Section I of the questionnaire were tabulated by

frequency and percentage. Section II of the questionnaire data were analyzed by Analysis of Variance statistical technique for determining the differences between food related opinion mean scores and length of residency, age, sex, and prescibed diet of the respondents. Data were also analyzed by the Analysis of Variance in regard to the difference between food related opinions about food service, therapeutic diets, normal nutrition, and food habits according to the variables selected for this study.

Fifty-seven percent of the respondents had resided in the home less than two years. Twenty-nine percent had lived in the home more than three years. There were 31 females and 20 males included in the study. Sixty-two percent of the participants were over 75 years of age, while twenty-five percent were over the age of 85. The ratio of males to females was approximately the same in three age groups: 65-69, 70-74, and over 85. In two of the age groups, including 75-85, there were 14 females and only five males. The majority of the respondents (48 percent) were on a regular diet in comparison to the other diet orders. One out of 10 of the subjects was on a low salt diet, five respondents were given a diabetic diet, and nine were on diets such as high fiber, low protein, high potassium, or low fat.

The residents who had lived in the home more than three years had the highest overall mean score (3.47) for all food related opinions. The respondents who had lived in the home two to three years held the lowest overall mean score (3.10); their lowest mean score was in the food service opinion section (2.76).

Food related opinions indicated that 65-69, or the youngest age group, had the highest mean score (3.39). The lowest mean score (3.1)

was held by the oldest group of respondents--those over 85 years of age. The mean scores did not decrease with age, as the 70-74 and the 75-79 age groups both had the same overall mean scores of 3.36.

The mean overall score for the food related opinions was 3.29. The numerical variation for mean scores given by the sexes was very slight. Males had a mean score of 3.29 and the mean score for females was 3.30.

Respondents on the diabetic regime held the highest mean score (3.43). Respondents who were on diet as high fiber, low fat and regular regime revealed the lowest mean score of 3.28.

The Analysis of Variance statistical technique was used in this study to determine the differences between the food related opinions held by the respondents and the length of residence, age, sex, or prescribed diet. No significant differences were revealed at the .05 level. Hence, data from the food related opinions expressed were also analyzed according to the differences between time spent in the home, age, sex, or prescribed diet of the respondents and to the food service, therapeutic diets, normal nutrition, as well as, food habits. Again, no significant differences were determined.

Food related opinions revealed in this study were useful for recommendations to the nursing home dietary staff. Seventy percent of the respondents held the opinion that the meal times were happy and served with attractive trays. Over 60 percent agree that the home served well seasoned, proper temperature foods. However, less than 60 percent of the respondents identified that they had as much fresh fruit, fresh vegetables, or bacon as they desired.

Responses to therapeutic diets indicated that 70 percent of the subjects agreed that doctor's prescribed diet should be followed, while

only 46 percent indicated that a food gift should be withheld if not on the resident's diet prescription. Less than 30 percent of the respondents disagreed that the diabetic should not have birthday cake or eat honey.

Respondents agreed that the basic four food groups needed to be eaten daily. Over 50 percent agreed that the food served followed a well-balanced meal plan.

Two-thirds of the respondents agreed that it is good to try new foods and they were willing to do so. Yet, 51 percent agreed that it would be good to have the same food served on a particular day each week. Sixty-six percent of the respondents felt that fried foods tasted better than other foods. The majority of the respondents disliked casseroles. Most of the respondents agreed that the evening meal should be at 5:00 p.m. or later.

Conclusions

There was no significant difference between food related opinions held by the respondents and the variables selected for this study. The residents who had lived in the home less than one year revealed food related opinions which were similar to those residents who had been in the home more than three years. Age and sex of the residents' food related opinions were not significantly different. The females agreed with the statements more often than the males, especially in the normal nutrition section of the questionnaire. The 65 year olds agreed or disagreed with statements in much the same way as did the over 85 year olds. The responses of the subjects who were on restricted diets were very much the same as those residents on the regular diet. However, the

respondents identified strong agreement or disagreement opinions to selected statements related to food service, therapeutic diets, normal nutrition, and food habits. The food related opinion responses held by the respondents could be incorporated into nutritional care of the nursing home resident who eats in the dining room.

Suggestions and Recommendations

The following suggestions were made by the researcher that could be instituted by the nursing home dietary staff. Based on the analysis of data, these were:

1. Menus should be adjusted to add more fresh fruits, fresh vegetables and bacon to the non-diet restricted residents.

2. Assurance should be given to the nursing home residents that people are willing to give aid to them at meal times.

3. Thermometers should be used so that food can be served at the proper temperatures.

4. The nursing home staff should encourage the resident to follow the prescribed diet by the physican.

5. The resident should be counseled by the dietitian so that he/she can understand all aspects of the modified diet in relation to their good health.

6. Plan meals around foods which are familiar to the nursing home resident incorporating a variety of the basic four food groups.

7. The evening meal should be served at 5 p.m. or later.

8. Nutrition education for nursing home residents could be developed to aid them in understanding the importance of nutrituion to their health.

Suggestions and recommendations made which were not substantiated by the study were as follows:

1. Food related opinions should be obtained from all residents who are able to respond to incorporate their opinions to food served to them. The food related opinion survey should be made, as soon as, possible after admission and kept for future reference.

2. A follow-up survey should be implemented after six months from the admission of the resident in the home. The survey should be conducted to find if new opinions have been formed or if the resident has opinions he/she would like to express that they did not think of at the admission interview.

3. A dietary council should function in a nursing home on a regular basis with a group situation. The council should set objectives to seek food related opinions held by the residents and these opinions incorporated into the food service.

Recommendations for further research are as follows:

1. To conduct a study of food related opinions of nursing home residents using a random sample selected from nursing homes in a larger geographical area.

2. To limit a study of food related opinions to only one aspect of food, such as opinions about food service.

3. To study the relationship between the food related opinions of nursing home residents and those of their adult children.

4. To determine the relationship between food related opinions of nursing home residents and other variables such as health status of the individual, medications prescribed, and family status.

5. To study the food related opinions of nursing home residents and non-institutionalized elderly.

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APPENDICES

APPENDIX A

LETTER FOR INSTRUMENT HELP

Oklahoma State University

Department of Food, Nutrition and Institution Administration

STILLWATER, OKLAHOMA 74078
(405) 624-5039

August 4, 1979

Dear

I am pursuing a M.S. Degree in Food, Nutrition and Institution Administration from Oklahoma State University. To fulfill the requirements for the degree, I am conducting a research study of food related opinions among nursing home residents for the purpose of aiding food service personnel in meeting the resident's nutritional needs and satisfaction regarding food.

Knowing of your interest and expertise in nutrition of the elderly, your assistance will be valuable in further developing the instrument to be used in this study. Will you please consider each "opinion" and give any suggestions you may have to each of the following:

1. Are the statements categorized properly?
2. Are the statements worded clearly?
3. Are the statements appropriate?
4. What statements should be omitted?
5. What statements would you like to see added?

I would appreciate having your suggestions returned by August 30th. For your convenience, I am sending a stamped self-addressed envelope. Thank you for your assistance.

Sincerely yours,

Della M Creach

Della Creach, R.D.

Bernice Kopel

Bernice Kopel, Ed.D.
Assoc. Prof.

APPENDIX B

QUESTIONNAIRE

Food Related Opinions

PART I:

Sex_____

Admission Date_____

Birth Date_____

Diet Order_____

PART II:

The purpose of this study is to identify opinions held by nursing home residents toward food and food service. The resident's response was recorded from an interview for each respondent. The response is recorded as: strongly agree = 5, agree = 4, uncertain = 3, disagree = 2, strongly disagree = 1.

Food Service

A. Opinions Related to Food Service.

1. In my opinion, the meal times are happy times here.
2. In my opinion, the food is served attractively.
3. In my opinion, the home strives to serve the kinds of foods that I like each meal.
4. In my opinion, the cooks serve foods that have been seasoned well and cooked properly.
5. In my opinion, people are willing to help me with my meals when I need help.
6. In my opinion, I am served as much fresh fruit and vegetables as I like to have.
7. In my opinion, I have as much bacon as I would like to have or is on my diet.
8. In my opinion, I have the kinds of snacks that I like.
9. In my opinion, the foods here are served proper temperatures.

Therapeutic Diets:

B. Opinions Related to Thereapeutic Diets.

10. In my opinion, a low salt diet would be easy to follow.

11. In my opinion, if a doctor prescribes a diet it should be followed.

12. In my opinion, a diabetic should be allowed a piece of birthday cake at birthday parties.

13. In my opinion, an overweight individual should be willing to cut down on food to lose weight.

14. In my opinion, honey may be included in a diabetic diet.

15. In my opinion, people who have stomach ulcers and are on a bland diet may have coffee and tea.

16. In my opinion, all persons with the same type diets should eat at the same table.

17. In my opinion, the food brought as gifts to the residents should be given to them although the food might not be on their diets.

Normal Nutrition:

C. Opinions Related to Normal Nutrition.

18. In my opinion, I should eat all the food that is served.

19. In my opinion, foods such as brown beans, cabbage, and saurkraut cause gas and should be served only for lunch.

20. In my opinion, it is necessary that I drink two glasses of milk or eat two dairy foods daily.

21. In my opinion, the proper foods are served here to prevent constipation.

22. In my opinion, the food here follows a well balanced meal plan.

23. In my opinion, I should have at least two servings of meat daily.

24. It is my opinion that I should drink orange juice or some other vitamin C juice daily.

25. It is my opinion that I should eat at least four servings of fruits and vegetables daily.

26. It is my opinion that I should eat four servings of bread and cereals daily.

Food Habits:

D. Opinions Related to Food Habits.

27. In my opinion, it is good to try new foods and I am willing to do so.

28. In my opinion, fried foods are more enjoyable and have more flavor than other foods.

29. In my opinion, large snacks are nice to have before going to bed.

30. In my opinion, it is good to have a variety of foods at breakfast.

31. In my opinion, meats and vegetables cooked separately are better than cooked together in a casserole.

32. In my opinion, breakfast should be served at 7:00 a.m. or earlier.

33. In my opinion, supper should be served at 5:00 p.m. or later.

34. In my opinion, the same foods should be served each day of the week (such as beans every Monday or fried chicken every Sunday).

35. In my opinion, I would say my food habits have improved since I came to live here.

APPENDIX C

OPINION RESPONSES

TABLE XLV

LENGTH OF RESIDENCY AND FOOD SERVICE OPINIONS
N=51

Opinions	Less Than One Year			1-2 Years			2-3 Years			Over 3 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
1. The meal times are happy times here.	8	8	24	0	4	14	6	0	8	2	2	24	16	14	70
2. The food is served attractively here.	10	2	27	0	0	17	8	0	6	2	2	26	20	4	76
3. The home strives to serve the kinds of foods I like.	14	4	21	6	2	10	6	0	8	8	0	21	34	6	60
4. The cooks serve foods that have been well seasons.	5	6	27	2	2	14	8	0	6	10	0	20	25	8	67
5. People are willing to help me with my meals.	6	10	22	0	2	16	4	2	8	4	6	2	14	20	66
6. I am served as much fresh fruit and vegetables as I like to have.	23	2	14	12	0	6	8	0	6	20	0	9	63	2	35
7. I have as much bacon as I would like to have or is on my diet.	12	0	17	10	0	8	8	0	6	15	0	14	55	0	45

TABLE XLV (Continued)

Opinions	Less Than One Year			1-2 Years			2-3 Years			Over 3 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
8. I have the kinds of snacks that I like.	18	2	20	6	0	12	10	0	4	15	0	13	49	2	49
9. The food here is served proper temperatures.	6	10	23	4	2	12	0	6	8	4	2	23	14	20	66

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE XLVI

LENGTH OF RESIDENCY AND THERAPEUTIC DIET OPINIONS
N=51

Opinions	Less Than One Year			1-2 Years			2-3 Years			Over 3 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
10. A low salt diet would be easy to follow.	20	8	12	8	6	4	6	2	6	17	2	9	51	18	31
11. If a doctor prescribes a diet it should be followed.	2	6	32	4	2	12	2	0	12	6	2	20	14	10	76
12. A diabetic should be allowed a piece of the birthday case at the birthday parties.	12	12	16	2	6	10	6	2	6	4	3	20	24	23	53
13. An overweight individual should be willing to cut down on food to lose weight.	10	4	24	2	0	16	2	4	8	3	0	26	18	8	74
14. Honey may be included in a diabetic diet.	10	18	12	0	14	4	6	2	6	4	9	15	20	43	37
15. People who have stomach ulcers and are on a bland diet may have coffee and tea.	8	23	8	2	10	6	4	2	8	4	8	17	18	43	39

TABLE XLVI (Continued)

Opinions	Less Than One Year			1-2 Years			2-3 Years			Over 3 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
16. All persons with the same type diets should eat at the same table.	16	4	20	2	2	14	2	4	8	4	12	22	24	22	54
17. The food brought as gifts to the residents should be given to them even if the food might not be included on their diets.	4	12	12	12	0	6	6	0	8	13	6	10	47	18	36

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE XLVII

LENGTH OF RESIDENCY AND NORMAL NUTRITION OPINIONS
N=51

Opinions	Less Than One Year			1-2 Years			2-3 Years			Over 3 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
18. I should eat all the food that is served.	6	4	20	8	0	10	8	0	6	17	2	9	49	6	45
19. Foods such as brown beans, cabbage, and saurkraut cause gas and should be served only for lunch.	4	10	25	8	6	4	0	6	8	4	9	16	16	31	53
20. It is necessary that I drink two glasses of milk or eat two dairy foods daily.	12	2	26	8	0	10	0	0	14	10	4	16	30	6	64
21. The proper foods are served here to prevent constipation.	18	0	22	6	0	12	7	0	6	4	2	23	35	2	63
22. The food here follows a well balanced meal plan.	4	14	22	4	2	12	4	2	8	4	2	22	16	20	64
23. I should have at least two servings of meat daily.	8	4	27	6	2	10	2	0	12	6	4	19	22	10	68

TABLE XLVII (Continued)

Opinions	Less Than One Year			1-2 Years			2-3 Years			Over 3 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
24. I should drink orange juice or some other Vitamin C juice daily.	13	0	26	2	0	16	0	0	14	3	0	26	18	0	82
25. I should eat at least four servings of fruits and vegetables daily.	10	8	22	4	0	14	4	0	10	4	4	20	22	12	66
26. I should eat four servings of bread and cereals daily.	12	6	18	10	2	6	10	0	4	9	0	23	41	8	51

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE XLVIII

LENGTH OF RESIDENCY AND FOOD HABIT OPINIONS
N=51

Opinions	Less Than One Year			1-2 Years			2-3 Years			Over 3 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
27. It is good to try new foods and I am willing to do so.	12	4	23	2	0	16	2	0	12	8	4	17	24	8	68
28. Fried foods are more enjoyable and have more flavor than other foods.	13	2	24	4	2	12	2	2	10	4	4	31	23	10	67
29. Large snacks are nice to have before going to bed.	30	0	10	14	2	2	4	0	10	7	6	15	55	8	37
30. It is good to have a variety of foods at breakfast.	6	4	26	6	2	10	8	2	4	12	4	16	32	12	56
31. Meats and vegetables cooked separately are better than cooked together in a casserole.	13	4	22	6	2	10	10	0	4	4	8	17	33	14	53
32. Breakfast should be served at 7 a.m. or earlier.	12	2	26	7	6	4	2	2	10	6	2	21	27	12	61
33. Supper should be served at 5 p.m. or later.	2	4	33	0	4	14	0	2	12	2	0	27	4	10	86

TABLE XLVIII (Continued)

Opinions	Less Than One Year			1-2 Years			2-3 Years			Over 3 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
34. The same foods should be served each day of the week (such as beans every Monday or friend chicken every Sunday).	18	4	18	4	2	12	6	0	8	9	6	23	37	12	51
35. I would say my food habits have improved since I came here to live.	14	8	18	2	4	12	6	0	8	11	6	9	33	18	47

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE XLIX

AGE OF RESPONDENTS AND FOOD SERVICE OPINIONS
N=51

Opinions	65-69 Years			70-74 Years			75-79 Years			80-84 Years			Over 85 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
1. The meal times are happy times here.	2	2	16	2	2	14	2	4	10	4	2	15	6	4	15	16	14	70
2. The food is served attractively here.	4	0	16	6	2	10	0	0	16	4	2	16	6	0	18	20	4	76
3. The home strives to serve the kinds of foods I like.	4	0	16	6	2	10	8	0	8	10	0	11	6	4	15	34	6	60
4. The cooks serve foods that have been well seasoned.	0	2	18	6	0	12	4	0	12	8	2	11	17	4	13	25	8	67
5. People are willing to help me with my meals.	2	4	14	0	6	12	4	2	10	2	4	16	6	4	14	14	20	66

TABLE XLIX (Continued)

Opinions	65-69 Years			70-74 Years			75-79 Years			80-84 Years			Over 85 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
6. I am served as much fresh fruit and vegetables as I like to have.	10	0	10	8	2	8	8	0	8	16	0	4	21	0	5	63	2	35
7. I have as much bacon as I would like to have or is on my diet.	12	0	8	10	0	8	11	0	4	10	0	12	12	0	13	55	0	45
8. I have the kinds of snacks that I like.	6	0	14	8	0	10	8	0	8	8	2	12	19	0	5	49	2	49
9. The food here is served proper temperatures.	0	0	20	4	6	8	2	0	14	8	4	10	0	10	14	14	20	66

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE L

AGE OF RESPONDENTS AND THERAPEUTIC DIET OPINIONS
N=51

Opinions	65-69 Years			70-74 Years			75-79 Years			80-84 Years			Over 85 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
10. A low salt diet would be easy to follow.	6	8	6	6	2	4	10	2	4	14	2	6	15	4	11	51	18	31
11. If a doctor prescribes a diet it should be followed.	2	0	18	0	2	16	4	0	12	4	0	18	4	8	12	14	10	76
12. A diabetic should be allowed a piece of the birthday cake at the birthday parties.	2	8	10	8	4	6	4	0	12	6	4	12	4	7	13	24	23	53
13. An over-weight individual should be willing to cut down on food to lose weight.	4	0	16	0	4	14	4	2	10	4	2	16	5	0	18	18	8	74

TABLE L (Continued)

Opinions	65-69 Years			70-74 Years			75-79 Years			80-84 Years			Over 85 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
14. Honey may be included in a diabetic diet.	6	10	4	6	2	10	2	8	6	0	10	12	6	13	5	20	43	37
15. People who have stomach ulcers and are on a bland diet may have coffee and tea.	6	10	4	10	4	4	2	6	7	0	12	10	2	11	14	18	43	39
16. All persons with the same type diets should eat at the same table.	6	2	12	4	6	8	4	2	10	4	8	10	6	4	14	24	22	54

TABLE L (Continued)

Opinions	65-69 Years			70-74 Years			75-79 Years			80-84 Years			Over 85 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
17. The food brought as gifts to the residents should be given to them even if the food might not be included on their diets.	4	8	8	10	4	4	8	0	8	16	0	6	9	6	10	47	18	36

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE LI

AGE OF RESPONDENTS AND NORMAL NUTRITION OPINION
N=51

Opinions	65-69 Years			70-74 Years			75-79 Years			80-84 Years			Over 85 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
18. I should eat all the food that is served.	8	0	12	10	2	6	8	2	8	14	0	8	9	4	9	49	6	5
19. Food such as brown beans, cabbage, and saurkraut cause gas and should be served only for lunch.	4	10	8	0	8	10	6	0	10	4	6	12	2	7	13	16	31	53
20. It is necessary that I drink two glasses of milk or eat two dairy foods daily.	10	0	10	4	2	12	4	0	12	6	4	12	6	0	18	30	6	64
21. Proper foods are served here to prevent constipation.	8	0	12	8	0	10	2	2	12	2	0	14	15	0	17	35	2	63

TABLE LI (Continued)

Opinions	65-69 Years			70-74 Years			75-79 Years			80-84 Years			Over 85 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
22. The food here allows a well balanced meal plan.	0	2	18	2	2	14	2	0	14	0	8	14	12	12	4	16	20	64
23. I should have at least two servings of meat daily.	6	2	12	4	2	12	4	2	10	2	0	20	6	4	14	22	10	68
24. I should drink orange juice or some other Vitamin C juice daily.	4	0	16	2	0	16	2	0	12	8	0	14	2	0	24	18	0	82
25. I should eat at least four servings of fruits and vegetables daily.	2	4	14	4	2	12	2	2	12	8	2	12	6	2	16	22	12	66

TABLE LI (Continued)

Opinions	65-69 Years			70-74 Years			75-79 Years			80-84 Years			Over 85 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
26. I should eat four servings of bread and cereals daily.	12	0	8	6	2	10	8	0	8	6	4	12	9	2	13	41	8	51

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE LII

AGE OF RESPONDENTS AND FOOD HABIT OPINIONS
N=51

Opinions	65-69 Years			70-74 Years			75-79 Years			80-84 Years			Over 85 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
27. It is good to try new foods and I am willing to do so.	6	4	10	8	0	10	4	0	12	4	4	14	2	0	12	24	8	68
28. Fried foods are more enjoyable and have more flavor than other foods.	4	2	14	4	4	10	0	2	14	8	2	11	7	0	18	23	10	67
29. Large snacks are nice to have before going to bed.	10	2	8	8	0	10	6	2	8	10	4	8	21	0	13	55	8	37
30. It is good to have a variety of foods at breakfast.	6	2	12	2	4	12	8	0	8	8	2	12	8	4	14	32	12	56

TABLE LII (Continued)

Opinions	65-69 Years			70-74 Years			75-79 Years			80-84 Years			Over 85 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
31. Meats and vegetables cooked separately are better than cooked together in a casserole.	11	4	4	2	2	13	4	2	10	6	2	14	10	4	12	33	14	53
32. Breakfast should be served at 7 a.m. or earlier.	4	2	13	2	0	16	6	0	10	6	0	16	9	10	6	27	12	61
33. Supper should be served at 5 p.m. or later.	5	0	18	0	2	16	0	0	16	0	0	22	2	8	14	4	10	86
34. The same foods should be served each day of the week (such as beans every Monday or fried chicken each Sunday).	12	0	8	8	2	8	2	4	10	4	4	13	11	2	12	37	12	27

TABLE LII (Continued)

Opinions	65-69 Years			70-74 Years			75-79 Years			80-84 Years			Over 85 Years			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
35. I would say my food habits have improved since I came here to live.	6	2	12	10	2	6	4	6	6	6	6	10	9	2	13	33	18	47

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE LIII

SEX OF THE RESPONDENTS AND FOOD SERVICE OPINIONS
N=51

Opinions	Female			Male			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.
1. The meal times are happy times here.	8	4	47	8	10	23	16	14	70
2. The food is served attractively here.	10	2	47	10	2	29	20	4	76
3. The home strives to serve the kinds of foods I like.	16	6	37	18	0	23	34	6	60
4. The cooks serve foods that have been well seasoned.	12	6	41	13	2	26	25	8	67
5. People are willing to help me with my meals.	6	12	41	8	8	25	14	20	66
6. I am served as much fresh fruit and vegetables as I like to have.	33	2	23	30	0	32	63	2	35
7. I have as much bacon as I would like to have or is on my diet.	28	0	31	27	0	34	55	0	45

TABLE LIII (Continued)

Opinions	Female			Male			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.
8. I have the kinds of snacks that I like.	27	2	28	22	0	21	49	2	49
9. The food here is served proper temperatures.	10	10	39	4	10	27	14	20	66

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE LIV

SEX OF THE RESPONDENTS AND THERAPEUTIC DIET OPINIONS
N=51

Opinions	Female			Male			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.
10. A low salt diet would be easy to follow.	30	4	23	21	14	8	51	18	31
11. If a doctor prescribes a diet it should be followed.	4	6	50	10	4	26	10	10	76
12. A diabetic should be allowed a piece of the birthday cake at the birthday parties.	12	14	34	12	9	29	24	23	53
13. An overweight individual should be willing to cut down on food to lose weight.	10	6	42	7	2	32	18	8	74
14. Honey may be included in a diabetic diet.	16	23	20	4	20	17	20	43	37
15. People who have stomach ulcers and are on a bland diet may have coffee and tea.	8	25	25	10	18	14	18	43	39

TABLE LIV (Continued)

Opinions	Female			Male			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.
16. All persons with the same type diets should eat at the same table.	12	12	38	12	10	16	24	22	54
17. The food brought as gifts to the residents should be given to them even if the food might not be included on their diets.	28	10	22	19	8	14	47	18	36

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE LV

SEX OF THE RESPONDENTS AND THE NORMAL NUTRITION OPINIONS
N=51

Opinions	Female			Male			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.
18. I should eat all the food that is served.	28	2	29	21	4	16	49	6	45
19. Foods such as brown beans, cabbage, and saurkraut cause gas and should be served only for lunch.	10	12	37	6	9	16	16	31	53
20. It is necessary that I drink two glasses of milk or eat two dairy foods daily.	12	6	41	18	0	23	30	6	64
21. Proper foodw are served here to prevent constipation.	16	2	44	17	0	19	35	2	63
22. The food here follows a well balanced meal plan.	10	12	38	6	8	26	16	20	64
23. I should have at least two servings of meat daily.	6	6	47	16	4	21	22	10	68

TABLE LV (Continued)

Opinions	Female			Male			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.
24. I should drink orange juice or some other Vitamin C juice daily.	12	0	48	6	0	34	18	0	82
25. I should eat at least four servings of fruits and vegetables daily.	15	8	36	7	4	30	22	12	66
26. I should eat four servings of bread and cereals daily.	24	4	32	17	4	19	41	8	51

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE LVI

SEX OF THE RESPONDENTS AND FOOD HABITS OPINIONS
N=51

Opinions	Female			Male			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.
27. It is good to try new foods and I am willing to do so.	16	6	37	8	2	21	24	8	68
28. Fried foods are more enjoyable and have more flavor than other foods.	16	8	34	7	2	33	23	10	67
29. Large snacks are nice to have before going to bed.	34	6	20	21	2	17	55	8	37
30. It is good to have a variety of foods for breakfast.	20	6	33	12	6	23	32	12	56
31. Meats and vegetables cooked separately are better than cooked together in a casserole.	21	8	29	12	6	24	33	14	53
32. Breakfast should be served at 7 a.m. or earlier.	22	6	32	5	6	29	27	12	61

TABLE LVI (Continued)

Opinions	Female			Male			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.
33. Supper should be served at 5 p.m. or later.	4	4	51	0	6	35	4	10	86
34. The same foods should be served each day of the week (such as beans every Monday or fried chicken every Sunday).	20	8	32	17	6	19	37	12	51
35. I would say my food habits have improved since I came here to live.	20	10	29	13	8	13	33	18	47

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE LVII

PRESCRIBED DIET OF THE RESPONDENTS AND FOOD SERVICE OPINIONS
N=51

Opinions	Regular Diet			Low Salt Diet			Diabetic			Other Diets			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
1. Meal times are happy times here.	8	8	32	2	4	20	0	0	10	6	2	10	16	14	70
2. The food is served attractively.	10	4	33	6	0	20	0	0	10	4	0	14	20	4	76
3. The home strives to serve the kind of foods I like at each meal.	14	2	30	10	2	34	4	0	6	6	2	10	34	6	60
4. The cooks serve foods that have been well seasoned and cooked properly.	10	4	33	8	2	15	2	0	8	15	2	11	25	8	67
5. People are willing to help me with my meals when I need help.	2	16	29	4	2	20	4	2	4	4	0	14	14	20	66
6. I am served as much fresh fruit and vegetables as I like.	31	2	14	16	0	10	6	0	4	20	0	17	63	2	35

TABLE LVII (Continued)

Opinions	Regular Diet			Low Salt Diet			Diabetic			Other Diets			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
7. I have as much bacon as I would like and is on my diet.	24	0	23	12	0	14	8	0	2	11	0	16	55	0	45
8. I have the kinds of snacks that I like.	20	2	25	13	0	12	4	0	6	12	0	6	49	2	49
9. Foods are served at the proper temperature.	10	10	30	4	4	17	0	0	10	0	6	9	14	20	66

Percentages of responses
D = Disagree
U = Uncertain
A = Agree

TABLE LVIII

PRESCRIBED DIET OF THE RESPONDENTS AND THERAPEUTIC DIET OPINIONS
N=51

Opinions	Regular Diet			Low Salt Diet			Diabetic			Other Diets			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
10. A low salt diet would be easy to follow.	27	12	8	13	0	12	6	0	4	5	6	7	51	18	31
11. If a doctor prescribes a diet it should be followed.	8	8	31	4	0	31	2	0	8	0	2	6	14	10	76
12. A diabetic should be allowed a piece of the birthday cake at the birthday parties.	6	14	28	8	4	14	2	2	6	8	3	7	24	23	53
13. An overweight individual should be willing to cut down on food to lose weight.	12	2	32	2	0	24	4	2	4	0	4	14	18	8	74
14. Honey may be included in a diabetic diet.	4	20	22	4	14	8	4	4	2	8	7	5	20	43	37
15. People who have stomach ulcers and are on a bland diet may have coffee and tea.	8	23	16	4	10	12	2	2	6	4	10	5	18	43	39

TABLE LVIII (Continued)

Opinions	Regular Diet			Low Salt Diet			Diabetic			Other Diets			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
16. All persons with the same type diets should eat at the same table.	16	8	23	2	8	14	2	4	4	4	2	13	24	22	54
17. The food brought as gifts to the residents should be given to them even if the food might not be included on their diets.	32	6	10	8	6	12	2	0	8	5	6	6	47	18	36

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE LIX

PRESCRIBED DIET OF THE RESPONDENT NORMAL NUTRITION OPINIONS
N=51

Opinions	Regular Diet			Low Salt Diet			Diabetic			Other Diets			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
18. I should eat all the food that is served.	27	2	18	16	4	6	2	0	8	4	0	13	48	6	45
19. Foods such as brown beans, cabbage, and saurkraut cause gas and should be served only for lunch.	10	16	22	2	12	12	2	0	6	2	3	13	16	31	53
20. It is necessary that I drink two glasses of milk or eat two dairy foods daily.	22	2	24	6	0	20	0	2	8	2	2	12	30	6	64
21. The proper foods are served here to prevent constipation.	16	0	31	10	0	16	0	2	8	9	0	7	35	2	63
22. The food here follows a well balanced meal plan.	4	12	32	8	4	14	0	0	10	4	4	8	16	20	64
23. I should have at least two servings of meat daily.	14	4	30	6	2	18	2	2	6	0	2	14	22	10	68

TABLE LVIX (Continued)

Opinions	Regular Diet			Low Salt Diet			Diabetic			Other Diets			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
24. I should drink orange juice or some other Vitamin C juice daily.	8	0	39	4	0	21	0	0	10	6	0	12	18	0	82
25. I should eat at least four servings of fruits and vegetables daily.	14	8	25	6	2	18	0	0	10	2	4	13	22	12	66
26. I should eat four servings of bread and cereals daily.	20	4	24	6	4	16	4	0	6	11	0	5	41	8	51

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

TABLE LX

PRESCRIBED DIET OF THE RESPONDENT FOOD HABIT OPINIONS
N=51

Opinions	Regular Diet			Low Salt Diet			Diabetic			Other Diets			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
27. It is good to try new foods and I am willing to do so.	6	6	33	6	0	20	4	0	6	8	2	9	24	8	68
28. Fried food are more enjoyable and have more flavor than other foods.	10	4	33	8	2	16	4	0	6	2	4	12	23	10	67
29. Large snacks are nice to have before going to bed.	24	8	16	20	0	6	4	0	6	7	0	9	55	8	37
30. It is good to have a variety of foods at breakfast.	16	6	24	6	0	6	4	0	6	4	6	20	32	12	56
31. Meats and vegetables cooked separately are better than cooked together in a casserole.	16	8	24	6	6	14	4	0	6	7	0	21	33	14	53
32. Breakfast should be served at 7 a.m. or earlier.	14	8	26	6	4	16	2	0	8	5	0	11	27	12	61
33. Supper should be served at 5 p.m. or later.	0	6	41	2	2	22	0	0	10	2	2	13	4	10	86

TABLE LX (Continued)

Opinions	Regular Diet			Low Salt Diet			Diabetic			Other Diets			Total		
	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.	D.	U.	A.
34. The same foods should be served each day of the week (such as beans every Monday or fried chicken each Sunday).	18	6	24	10	4	12	2	2	6	7	0	9	37	12	51
35. I would say my food habits have improved since I came here to live.	13	10	24	12	4	8	2	2	6	6	2	9	33	18	47

Percentage of responses
D = Disagree
U = Uncertain
A = Agree

VITA

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